

Patent Abstracts of Japan

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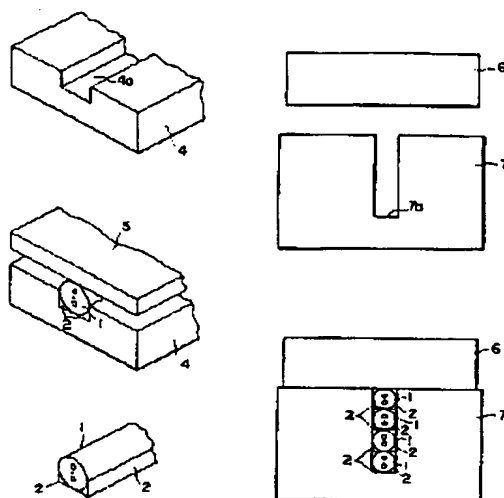
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TITLE : OPTICAL FIBER, OPTICAL FIBER
ARRAY AND PRODUCTION THEREOF



ABSTRACT : PURPOSE: To facilitate the holding of optical fibers by forming longitudinal projecting lines for holding a posture which have a section exclusive of a circular shape and have angle parts in the section thereof on the outer peripheral surface.

CONSTITUTION: The optical fiber 1 is put into a hollow groove 4a and the space between the optical fiber 1 and the hollow groove 4a is filled with a UV curing resin. While the part above the optical fiber is pressed by a glass substrate 5, the resin is irradiated with UV rays and is thereby cured. The optical fiber 1 is taken out of the hollow groove 4a of an Si substrate 4 after curing and the optical fiber integrally formed with the projecting lines 2 for holding the posture on the outer peripheral surface is obtd. The projecting lines 1 are placed along the inside wall of the holding groove 7a, by which the polarization maintaining directions of plural pieces of the optical fibers are unified in one direction. An LiNbO₃ substrate 6 is put on the optical fibers 1 to press the optical fibers. The UV curing resin is cured, by which the optical fiber array constituted of the polarization maintaining optical fibers uniformed in the polarization maintaining direction is obtd.

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